



The River Mile

3rd Annual Student Science Symposium

4th-12th Grade



May 19, 2010

9:00 am - 1:30 pm

Gonzaga University Campus



Keynote Address

Climate, Rivers, People and Change: A Tangle of Connections

Dr. Kelly Redmond

Regional Climatologist
Western Region Climate Center
Desert Research Institute
Reno, Nevada

Nothing is constant except change. Even as they appear to remain approximately the same, the climate around us, the rivers for which we feel such affinity, and the people who interact with them and with each other, are in a constant state of transition. Rivers symbolize this flow. Climate is about connections. When we try to understand how it works, we find that climate anywhere is connected to climate everywhere. These connections encompass everything on earth, including humans, who by their numbers can now affect climate at scales that extend from local to global.



Registration Information

The symposium is limited to 500 participants, including adults.

This year the symposium is open to all schools in NE Washington as space allows. If your class is the only one from your school participating in The River Mile, other grades and classes may also participate in the Symposium. All teachers actively participating in The River Mile during the 2009-2010 school year receive an early registration notification to ensure your class's and school/district's participation in the symposium. All registrations from an active school district will be honored during this early notification. Once the early notification period has closed all registrations from all schools will be honored.

Concurrent Session Choices

Each class participates in 2 concurrent sessions. Concurrent sessions limited to 25-30 participants, except for some outdoor programs. If your group is a small group you may be combined with another small group. The "Raptors of the Northwest Program" may have up to 75 participants, so you may be combined with another class for that program as well.

Registration Form Completion Instructions

Please complete one form for each teacher/class. Concurrent sessions are grouped by appropriate grade level and on separate registration forms. Please indicate your session choices by priority ordering the sessions for your grade level. Not all sessions are available for all grades. Please be sure to complete the appropriate form for your grade level. Failure to complete the correct form will delay your registration. **First come, first served on program assignments.**

Please also make a note next to any session in which your group has previously participated. This will help the registrar work your registration choices and minimize duplication.

Not everyone will get their first choice. We will do our best to provide you and your students with the best experience possible.

Registration Deadlines:

Early April 27, 2010

Regular May 6, 2010

No On-Site Registrations



Symposium Schedule

8:30-8:45	Arrival and Check-In
9:00-9:20	Welcome and Introductions Cataldo Hall
9:30	Concurrent Sessions throughout campus
10:50	Concurrent Sessions throughout campus
12:10	Lunch (brown bag on own) Cataldo Hall
12:45	Keynote Address (Cataldo Hall) Dr. Kelly Redmond, Western Regional Climate Center
1:30	End of Program
1:40	Load Buses

Location and Facilities

The River Mile's 2010 Student Science Symposium will be held at Gonzaga University in Spokane, Washington. The general assembly will be in Cataldo Hall (new venue), individual sessions will be around the campus in classrooms and outdoor open areas.

Symposium Logistics

Arrival and Check-In

Please plan to arrive between 8:30 and 8:45 AM. You will need to unload and walk to Cataldo Hall on campus. The buses will then be moved to a parking area for the day. We will begin at 9:00 am. Once the welcome has begun we may not be able to seat late arrivals. So, please be on time.

Lunch on Own—Bring Brown Bag Lunch.

These need to be easily carried, labeled with your school and class name and brought onto the campus at check-in. You will not have time to return to your bus to retrieve lunches. Lunches will be stored in Cataldo Hall and you may pick them up there and either eat in Cataldo Hall or outside.

Chaperones

Gonzaga University security requires all school groups to be accompanied by a teacher and adequate chaperones at all times. Please have at least one adult for every 10 students. Presenters are not responsible for student behavior.

Bus Unloading and Parking

Information will be sent with your confirmation materials.

Email, Fax or snail mail your form to:

Janice Elvidge
Education Specialist
Lake Roosevelt NRA
1008 Crest Drive
Coulee Dam, WA 99116
509-633-9188 ext. 12
509-633-9187 fax
Janice_Elvidge@nps.gov

Confirmation

A confirmation letter and additional symposium information and instructions will be sent to you in early May. (Hopefully by May 7th). If you do not receive confirmation by May 14th, please contact Janice Elvidge at the above address and phone number.

Partners and Sponsors

Gonzaga University, facilities and logistics
NPS Youth Partnership Program, grant funds
NPS Challenge Cost Share Program, grant funds
Lake Roosevelt Forum
NPS Lake Roosevelt National Recreation Area



Concurrent Sessions

NOTE: Not all sessions are available for all grades.

Aquatic Invertebrates

Brian Crossley

Spokane Tribe of Indians, Department of Natural Resources

A workshop on invertebrate sampling techniques, identification while providing a hands on exercise/competition (complete with prizes) in identification and general knowledge of the basic aquatic bug classifications.

MS, HS

Indoors

Bats and Bugs: The Benefit of Creating Bat Friendly Habitats

Jon Edwards

Lake Roosevelt National Recreation Area

Lake Roosevelt National Recreation Area recently undertook a project to exclude bats from a number of historic structures within the park. During this process we found how beneficial these creatures are to the environment, and discovered a fun way to exclude/remove these critters from our buildings while ensuring them a safe and bat friendly place to reside.

4th-6th

Indoor

Birds of The River Mile

Kim Thorburn, Joyce Alonso

Spokane Audubon Society

Students will learn about some birds and bird songs that they might encounter on The River Mile. With slides and taxidermy specimens, we will observe special anatomic adaptations for the birds' life cycle of brooding, migration and feeding. We will also review bird watching techniques.

(Presented at 2009 symposium)

All

Indoors/Outdoors

Cultural, Tribal, Historic Aspects of the Columbia River Hanford Reach

Tom Marceau

MSA-Department of Energy Support

History of Hanford, the creation of plutonium, and the Dept. of Energy's mission to cleanup and restore the environment in the Hanford Reach. Discussions of cultural and tribal history and uses from the top of Rattlesnake Mountain to the shores of the Columbia River.

MS, HS

Indoors

Environmental Restoration of the Columbia River Hanford

Darci Teel

YAHSGS - Department of Energy Support

History of Hanford, the creation of plutonium, and the Dept. of Energy's mission to cleanup and restore the environment in the Hanford Reach. Discussions of wildlife populations, habitat, and the diverse plant species from the top of Rattlesnake Mountain to the shores of the Columbia river.

MS, HS

Indoors

Favorite Activities and Places Along Rivers

Robin Bekkadahl

Avista Corporation

The presentation will include a discussion regarding favorite activities/places that we enjoy the river. Depending on time we could also discuss some activities not compatible with the rivers. The second half will include a field trip to the Spokane River and identify activities that they listed or new activities to add.

4th-6th

Indoors/Outdoors

Concurrent Sessions, Continued

Hydroacoustics:

Adaptive use for fish management in Lake Roosevelt.

MS, HS

Monte Miller

Indoors

Colville Confederated Tribe

A descriptive explanation of hydroacoustics and its use in fish management in Lake Roosevelt. We have completed a project using side looking hydroacoustics to count fish along sections of shoreline. The same shoreline was electrofished to provide specie presence over the substrate type. This will be tied to bathymetry to help quantify fish use by type over substrate and drawdown effects.

Incredible Journey through the Watershed

4th and 5th

Brook Beeler and Elizabeth Herrera

Outdoors

Washington State Department of Ecology

Learn about how water moves through earth's systems by becoming a water drop. After this incredible journey students will learn how to measure the health of local lakes and streams through benthic bug identification.

Intro to GPS and GIS Applications for Lake Roosevelt

MS, HS

Greg Behrens

Indoor/Outdoors

Geologist/Geographer

Gathering field data with a GPS unit and other field tools is simple and accurate. Assembling, analyzing and presenting that data is easily done utilizing a Geographic Information System software program. The students will be presented with these wonderful tools and shown examples on their utilization for natural resource investigations within the Lake Roosevelt environment.

Invasive Species Coming To Our River And Lakes

All

Coast Guard Auxiliary

Indoors

The invasion of quagga and zebra mussels from the eastern U.S. could be devastating to lakes, reservoirs and rivers of the western U.S. The U.S. Coast guard auxiliary has information via a DVD called 'Don't Move a Mussel' plus handouts. Activity would depend upon the age of the students. This can include making a poster, learning how to wash/check boats.

Keeping Our Waters Clean.

All

Coast Guard Auxiliary

Indoors

A look at what pollution is; what causes pollution; and how to prevent pollution. Program includes age appropriate videos, handouts and activities. Making a poster is one probable activity. This is a hands-on type of class, mixing oil and water, etc. One possible video is 'Saving Inky' (a whale) for younger children.

Lake Roosevelt Archaeology: Documenting, Protecting and Preserving Northeastern Washington's Past

MS, HS

John Pouley

Indoors

Confederated Tribes of the Colville Reservation, History/Archaeology Program

Archaeology studies prehistoric (the time before written records) cultures. It utilizes scientific methods to assist with understanding how people lived in the past. During the past 30 years, the role of archaeologists has also included preservation planning. At Lake Roosevelt, archaeologists study prehistoric residents and assist with protecting archaeological sites from unnecessary destruction, theft or erosion.

Concurrent Sessions, Continued

Native Plant ID Walk

Kathy Hutton

Plants of the Wild

Take a walk around campus to learn identification of some of our native trees and shrubs. Learn “secret clues” to decipher one plant from another. Plants will also be provided by the Plants of the Wild nursery for additional identification practice

All

Outdoors

The Not So Common Loon

Patti Baumgardner

Okanogan-Wenatchee National Forest

Our children find the beauty and magic of the loons, and come to realize that the decisions they make in their lives will influence how these birds fare. They explore migration and special adaptations, and begin to understand that it is imperative to enhance and protect what habitat is left.

5th, MS

Indoors

Quantifying Salmonid Habitat Availability in the San Poil River on the Colville Indian Reservation

Shay Wolverton

Coville Confederated Tribes Fish and Wildlife Department

Anadromous salmon utilized the Sanpoil River extensively before the construction of Grand Coulee Dam in 1941. After the construction kokanee salmon, resident form of sockeye salmon, began to utilize the Sanpoil River at some level. Today these kokanee populations have been extirpated from the Sanpoil River with no known reason why. The reestablishment of a large and sustainable kokanee population is a goal of the Colville Tribe. To meet this goal, knowledge gaps such as available spawning habitat need to be quantified. In 2009, a habitat survey was initiated. Information about kokanee salmon, our sampling methods, macroinvertebrates and their importance to habitat, water quality and its effects on fish, and results from our surveys will be presented.

HS

Indoors

Raptors of the Northwest

Beth Paragamian

Co-sponsored by Idaho Fish & Game, Bureau of Land Management, and Idaho Panhandle National Forests

Using raptor body parts, taxidermied displays and live birds, this presentation will engage the participants in discussion of types of raptors, raptor identification, and body design for efficient hunting, raptor ecology, and predator / prey relationships. Raptor pellets from the live birds may be used for dissection to see prey items.

4th -MS

Indoors

The Role of Vegetation Monitoring in Natural Resource Management at Lake Roosevelt National Recreation Area

Traci Degerman

NPS Lake Roosevelt National Recreation Area

Effective management is based on knowledge of both current and past conditions within the managed area. Vegetation monitoring is a vital aspect of natural resource management in National Park Service units, such as Lake Roosevelt, because the information it provides enables resource staff to evaluate the success of management strategies, and determine what actions to take to protect and enhance resource health.

MS, HS

Indoors

Concurrent Sessions, Continued

“Rolling River” – Interactive Model of a River System

Kayti Didricksen
Bureau of Reclamation

MS, HS

Outdoors

This interactive demonstration of a river system is fun to watch and a blast to play with. Watch the physical effects of erosion, deposition, and other stream processes, and how human modifications alter them.

Traveling On Our Waters

Coast Guard Auxiliary

All

Outdoors

A one hour presentation covering our waterway signs (Aids to Navigation), an introduction to Navigation Rules (Rules of the Road/Water), and a few safety hints of traveling on the water. Students will travel an imaginary waterway by obeying what they have learned through lecture and games.

Wildlife of the River: Their Needs and Uses Then and Now

Steven Judd, Wildlife Biologist, Retired &
Rick Desautel, Wildlife Damage Control Officer
Colville Confederated Tribe

4th -MS

Indoors

Our presentation will cover: the animals that use the river and the lands around it. We will discuss their habitat and how they use them. We will talk about how people use these animals in the past and how we use them today. There will be some hands-on interaction with animal skins, heads, etc.

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4th-5th Grade Class Registration Form

Return NO Later than COB April 27, 2010

Note: One class per form

Teacher: _____
School Name: _____
School Address: _____
City _____ State _____ Zip Code _____
Phone _____
Email _____
Students _____ # Chaperones _____
Grade _____

Concurrent Session Choices

Instructions:

- 1) Place in priority order
- 2) Note which programs, if any, your class has participated in this year
- 3) Pay close attention to grade level(s) indicated

Return to:

Janice Elvidge
Education Specialist
Lake Roosevelt NRA
1008 Crest Drive
Coulee Dam, WA 99116
509-633-9188 ext. 12
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Order Title

- _____ Bats and Bugs: The Benefit of Creating Bat Friendly Habitats
- _____ Birds of The River Mile
- _____ Favorite Activities and Places Along Rivers
- _____ Incredible Journey through the Watershed
- _____ Invasive Species Coming To Our River And Lakes
- _____ Keeping Our Waters Clean
- _____ Native Plant ID Walk
- _____ The Not So Common Loon **5th ONLY**
- _____ Raptors of the Northwest
- _____ Traveling On Our Waters
- _____ Wildlife of the River: Their Needs and Uses Then and Now

Notes:

The River Mile
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Middle School (6th-8th) Class Registration Form
Return NO Later than COB April 27, 2010

Note: One class per form

Teacher: _____
School Name: _____
School Address: _____
City _____ State _____ Zip Code _____
Phone _____
Students _____ # Chaperones _____
Grade _____

Concurrent Session Choices

Instructions:

- 1) Place in priority order
- 2) Note which programs, if any, your class has participated in this year
- 3) Pay close attention to grade level(s) indicated

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Order Title

- _____ Aquatic Invertebrates
- _____ Birds of The River Mile
- _____ Cultural, Tribal, Historic Aspects of the Columbia River Hanford Reach
- _____ Environmental Restoration of the Columbia River Hanford
- _____ Favorite Activities and Places Along Rivers 6th ONLY
- _____ Hydroacoustics: Adaptive use for fish management in Lake Roosevelt.
- _____ Intro to GPS and GIS Applications for Lake Roosevelt
- _____ Invasive Species Coming To Our River And Lakes
- _____ Keeping Our Waters Clean
- _____ Lake Roosevelt Archaeology: Documenting, Protecting and Preserving NE Washington's Past
- _____ Native Plant ID Walk
- _____ The Not So Common Loon
- _____ Quantifying Salmonid Habitat Availability in the San Poil River on the Colville Indian Reservation
- _____ Raptors of the Northwest
- _____ The Role of Vegetation Monitoring in Natural Resource Mgt at Lake Roosevelt NRA
- _____ "Rolling River" – Interactive Model of a River System
- _____ Traveling On Our Waters
- _____ Wildlife of the River: Their Needs and Uses Then and Now

Notes:

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High School (9th-12th) Class Registration Form

Return NO Later than COB April 27, 2010

Note: One class per form

Teacher: _____

School Name: _____

School Address: _____

City _____ State _____ Zip Code _____

Phone _____

Students _____ # Chaperones _____

Grade _____

Concurrent Session Choices

Instructions:

- 4) Place in priority order
- 5) Note which programs, if any, your class has participated in this year
- 6) Pay close attention to grade level(s) indicated

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- _____ The Role of Vegetation Monitoring in Natural Resource Mgt at Lake Roosevelt NRA
- _____ "Rolling River" – Interactive Model of a River System
- _____ Traveling On Our Waters

Notes: